

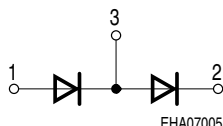
Silicon Schottky Diode

- For mixer applications in VHF/UHF range
- For high-speed switching application

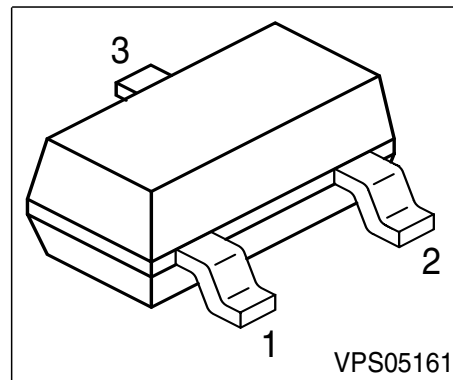
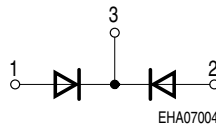
BAT 17



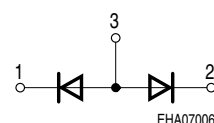
BAT 17-04



BAT 17-05



BAT 17-06



Type	Marking	Pin Configuration			Package
BAT 17	53s	1 = A	2 n.c.	3 = C	SOT-23
BAT 17-04	54s	1 = A1	2 = C2	3 = C1/A2	SOT-23
BAT 17-05	55s	1 = A1	2 = A2	3 = C1/2	SOT-23
BAT 17-06	56s	1 = C1	2 = C2	3 = A1/2	SOT-23

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	4	V
Forward current	I_F	130	mA
Total power dissipation $T_S \leq 60^\circ\text{C}$	P_{tot}	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 ... 150	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - ambient ¹⁾	R_{thJA}	≤ 750	
Junction - soldering point	R_{thJS}	≤ 590	

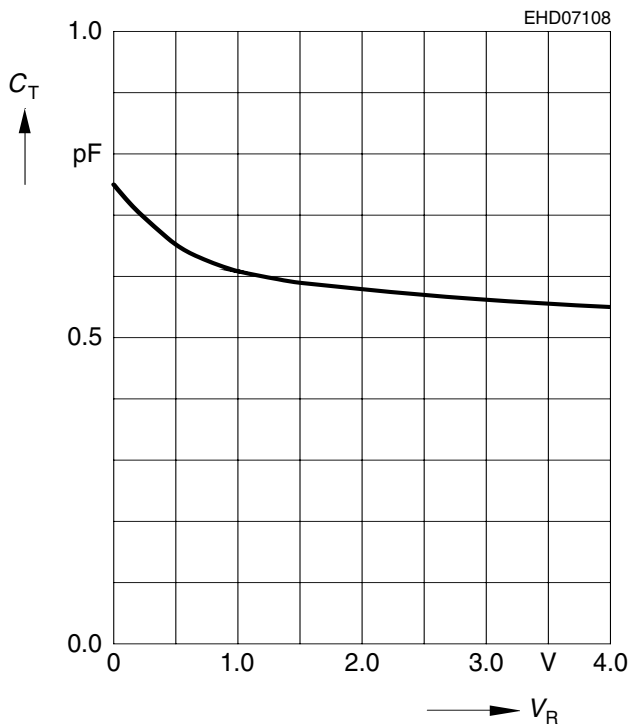
¹⁾Package mounted on epoxy pcb 40mm x 40mm x 1.5mm / 1cm²

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 10\ \mu\text{A}$	$V_{(BR)}$	4	-	-	V
Reverse current $V_R = 3$ $V_R = 4\ \text{V}$, $V_R = 3\ \text{V}$, $T_A = 60\ ^\circ\text{C}$	I_R	- - -	- - -	0.25 10 1.25	μA
Forward voltage $I_F = 0.1\ \text{mA}$ $I_F = 1\ \text{mA}$ $I_F = 10\ \text{mA}$	V_F	200 250 350	275 340 425	350 450 600	mV
AC Characteristics					
Diode capacitance $V_R = 0\ \text{V}$, $f = 1\ \text{MHz}$	C_T	0.4	0.55	0.75	pF
Forward resistance $I_F = 5\ \text{mA}$, $f = 10\ \text{kHz}$	R_F	-	8	15	Ω

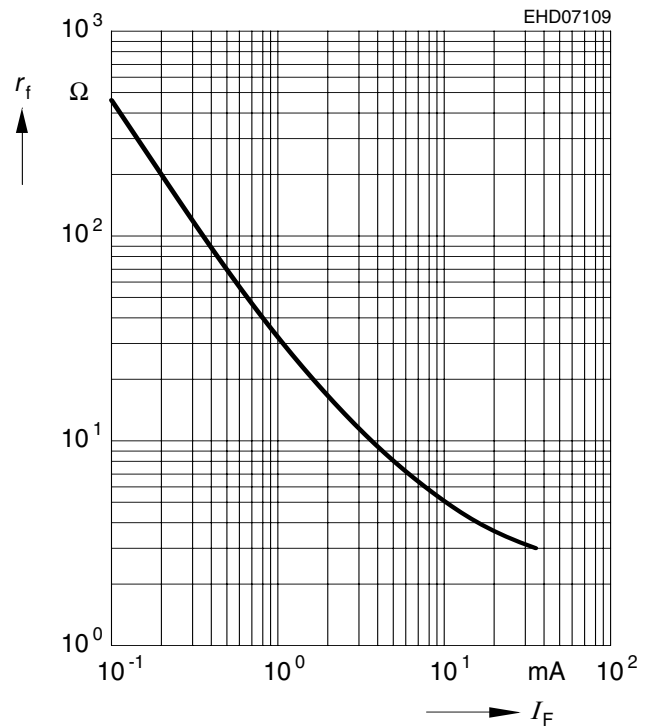
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



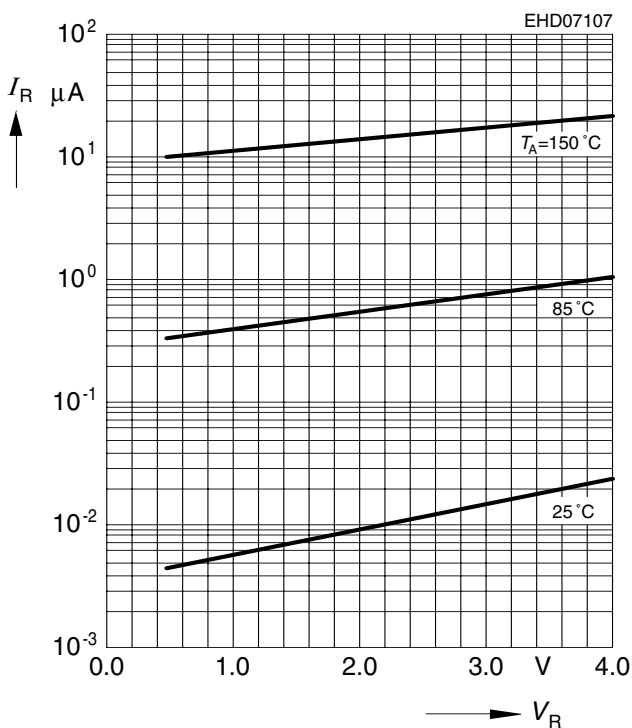
Forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



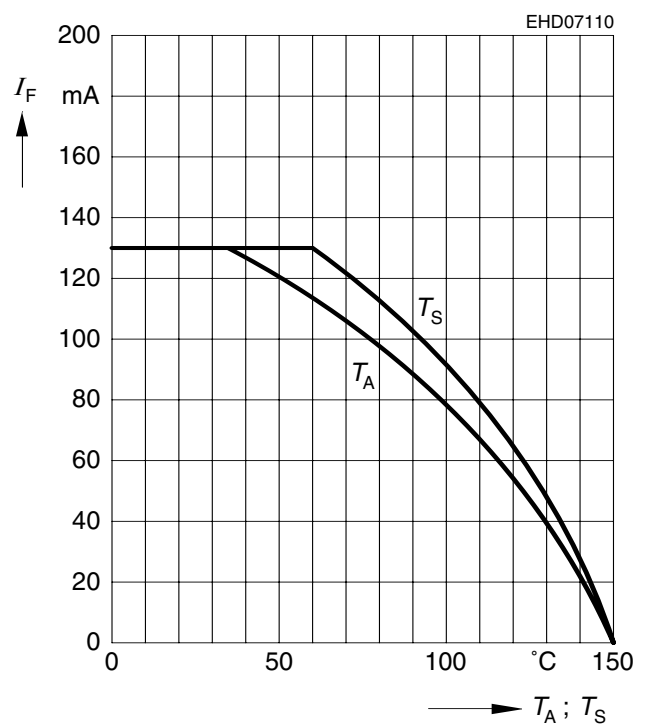
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



Forward current $I_F = f(T_A^*; T_S)$

* Package mounted on epoxy



Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$

